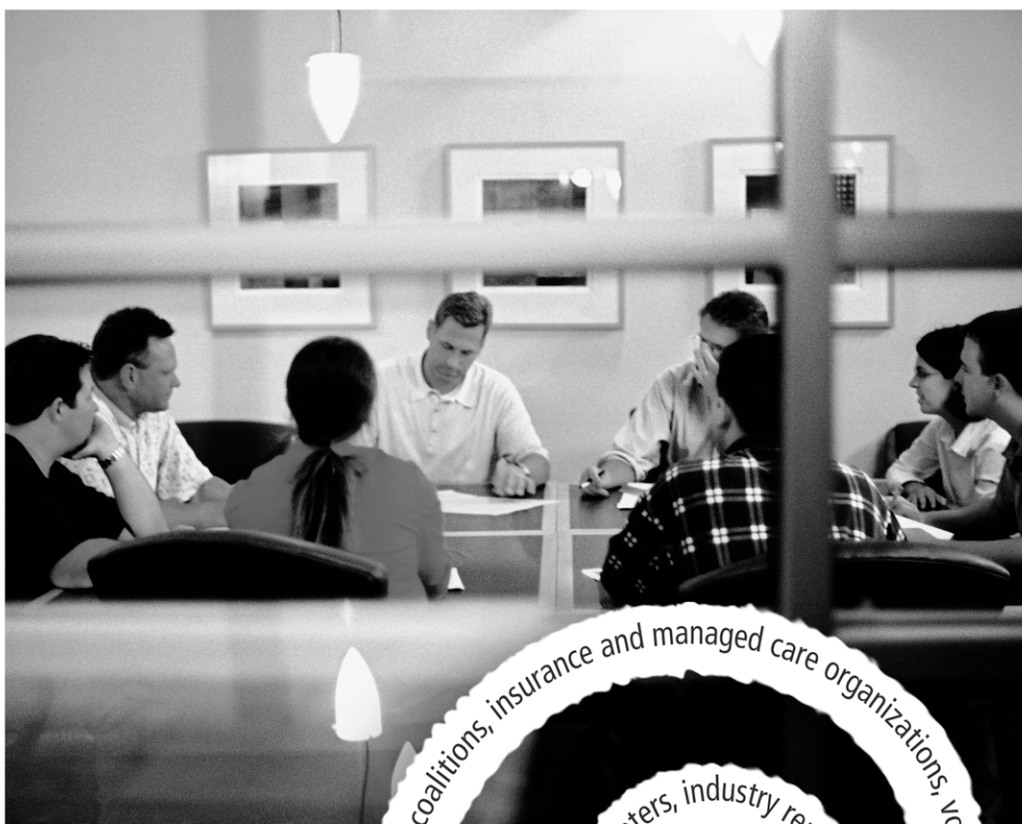


The Wisconsin Collaborative COLLABORATION Diabetes Quality Improvement Project 2003



Members represent over 50 diverse partners, including:

- health care and professional organizations, minority groups, school groups, public health, business coalitions, insurance and managed care organizations, voluntary and community-based organizations, academic centers, industry representatives, and consumers

INTRODUCTION

In 1999, the Wisconsin Collaborative Diabetes Quality Improvement Project (Project) began as a collaborative effort involving the Wisconsin Diabetes Prevention and Control Program (Wisconsin Department of Health and Family Services, Division of Public Health); the Division of Health Care Financing; the Diabetes Advisory Group Quality Improvement Workgroup; MetaStar, Inc.; the Wisconsin Public Health and Health Policy Institute; and a statewide group of health maintenance organizations and health systems.

The Collaborative Project was established as a forum to:

- Evaluate implementation of the Essential Diabetes Mellitus Care Guidelines
- Share resources, strategies and best practices
- Improve diabetes care through collaborative quality improvement initiatives

METHODS

Collaborators selected the Health Plan Employer Data and Information Set (HEDIS[®]) Comprehensive Diabetes Care measures to track progress in improving diabetes care. HEDIS[®] was developed by the National Committee for Quality Assurance (NCQA) in order to accredit HMOs and provides standardized data collection to assess quality of care. The Wisconsin Diabetes Prevention and Control Program contracts with the Wisconsin Public Health and Health Policy Institute (PHHPI) for confidential analysis and reporting. Specific HEDIS[®] data are sent to the PHHPI by each participating HMO and health system. Each participating organization is given a unique, confidential, identifying number, so it can see its own performance relative to the other organizations. The Project uses HEDIS[®] results cooperatively, not competitively, to share both successful strategies and lessons learned, with a goal of improving diabetes care in Wisconsin. NCQA requires accredited health plans to collect HEDIS[®] measures for care delivered in the previous calendar year (e.g., HEDIS[®] 2001 reflects care delivered in 2000). Average HMO values are presented in the figures and tables.

Data include:

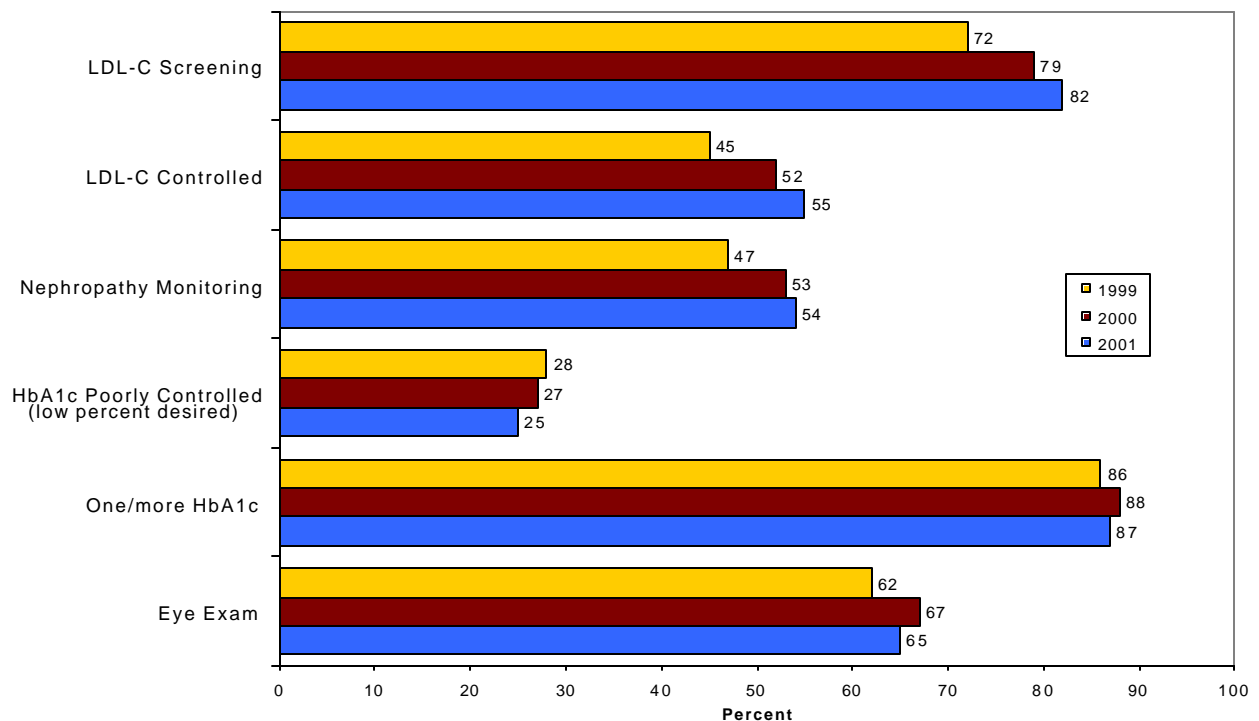
- HEDIS[®] Comprehensive Diabetes Care measures for care delivered in 1999-2001.
- Selected HEDIS[®] cardiovascular-related measures were added for care delivered in 2000 and 2001 to incorporate the new Cardiovascular Health Program into the Project.
- Selected HEDIS[®] cancer screening measures for care delivered in 2001, to broaden benefits for the new statewide Comprehensive Cancer Planning Program.

RESULTS: HEDIS® COMPREHENSIVE DIABETES CARE MEASURES, 1999-2001

As shown below, most of the diabetes measures have improved since the Project data collection began in 1999. Two measures – one/more HbA1c and eye exam – have shown little change since 2000. The figure and calculations below reflect data submitted by HMOs only.

- ↑ LDL-C screening improved by 14% since 1999 (72% to 82%)
- ↑ LDL-C controlled (<130 mg/dL) improved by 22% since 1999 (45% to 55%)
- ↑ Nephropathy monitoring improved by 15% since 1999 (47% to 54%)
- ↑ Poorly controlled HbA1c (>9.5%) improved by 11% since 1999 (a decrease from 28% to 25% demonstrates improvement)
- ↔ Three-year data for one/more HbA1c tests show little change
- ↔ Three-year data for eye exam show little change

Figure 1: Percent of Patients Receiving HEDIS® Comprehensive Diabetes Care Measures (for care given in 1999-2001); average value of 15 HMOs

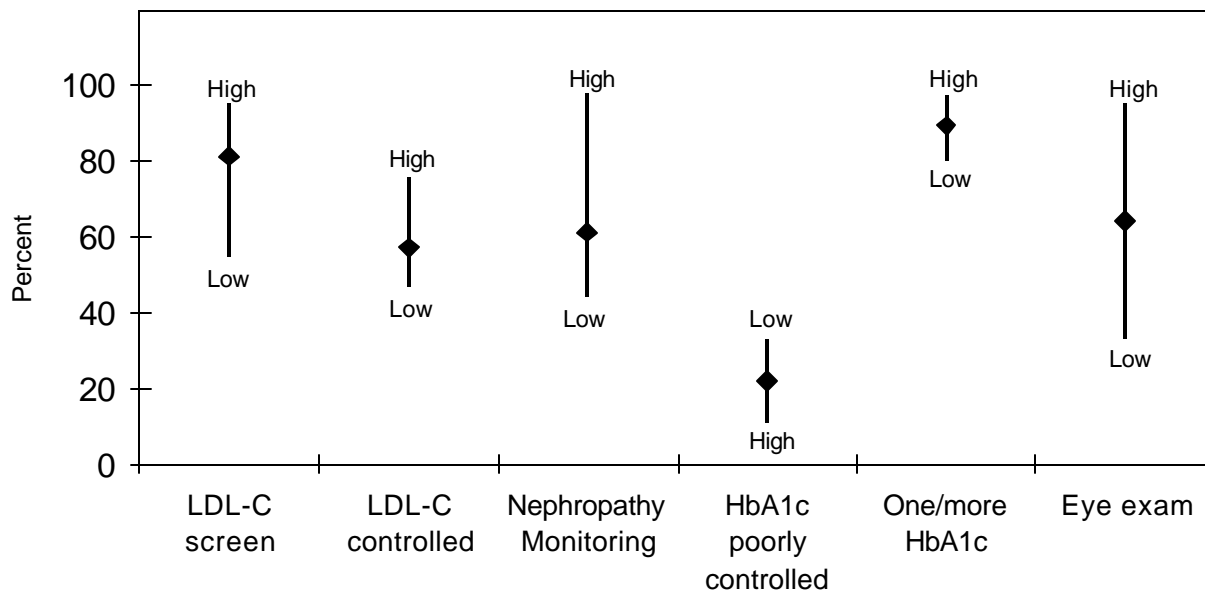


RESULTS: VARIATION IN HEDIS® COMPREHENSIVE DIABETES CARE MEASURES BY HEALTH SYSTEM, 2001 DATA

(Yearly data includes all health systems submitting data.)

- ✓ The quality of diabetes care was most consistent for HbA1c testing and control.
- ✓ Wide variations exist in other diabetes care measures. For example, one HMO had 95% of its enrollees with diabetes receive eye exams, while another had 33%.
- ✓ Most systems improved from 1999-2001:
 - 100% (16 out of 16 systems) improved their LDL-C screening, LDL-C controlled, and nephropathy monitoring rates.
 - 88% (14 out of 16 systems) improved their rates for HbA1c poorly controlled.
 - 75% (12 out of 16 systems) improved their rates for one/more HbA1c and eye exam measures.

Figure 2: Range and Mean (♦) for HEDIS® Comprehensive Diabetes Care Measures, 2001 (includes 15 HMOs and one health system).

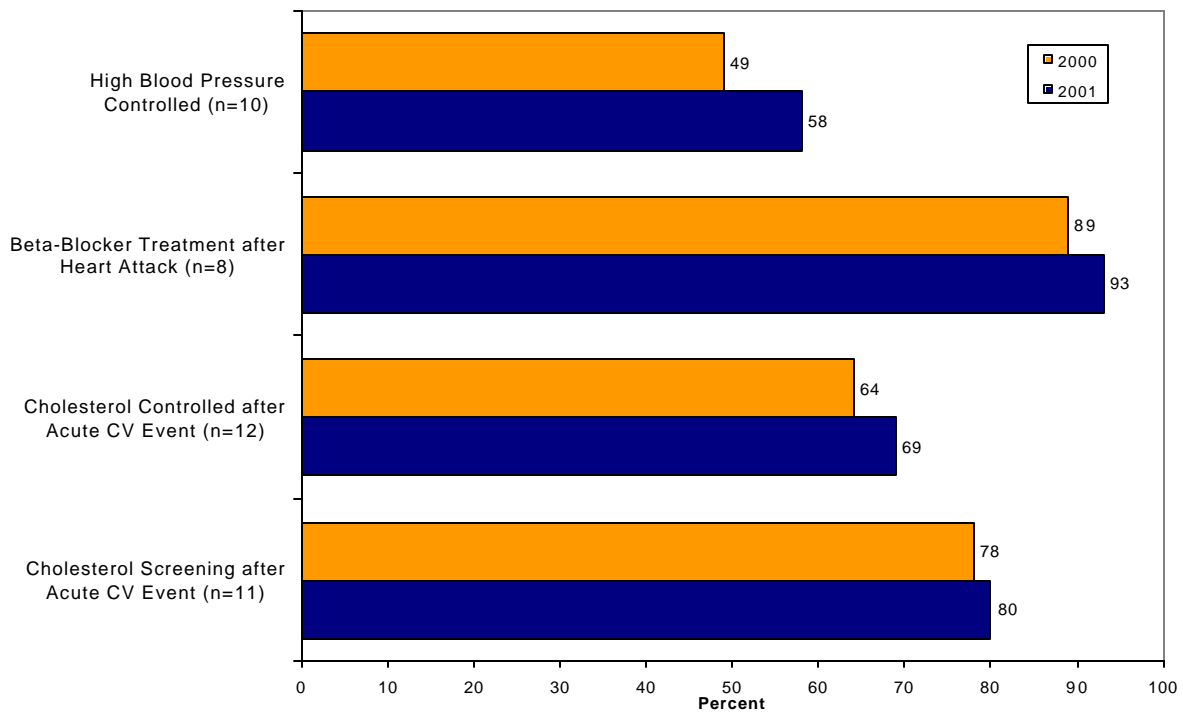


RESULTS: SELECTED HEDIS® CARDIOVASCULAR-RELATED CARE MEASURES, 2000-2001

Results below show there is improvement in all of the cardiovascular-related measures since 2000. The figure and calculations reflect data submitted by HMOs only.

- ↑ High blood pressure control improved by 7% (54% to 58%)
- ↑ Beta-blocker treatment after heart attack improved by 6% (90% to 95%)
- ↑ Cholesterol control (<130 mg/dL) after acute CV event improved by 6% (66% to 70%)
- ↑ Data for cholesterol screening after acute cardiovascular event show a slight increase

Figure 3: Percent of Patients Receiving Selected HEDIS® Cardiovascular-related Care Measures (for care delivered in 2000-2001)



n = the number of participating HMOs for each measure

RESULTS: SUMMARY OF PROJECT HEDIS® MEASURES FOR CARE DELIVERED IN 2001

(Yearly data includes all health systems submitting data.)

- ✓ Wisconsin is doing better than the national average, as well as the regional average on all but one (LDL-C screening) of the measures.
- ✓ At least one, and in some instances, several systems, did less well than the national average for any given measure.

Table 1: Comparison of Regional, National, and Project Populations Receiving Selected HEDIS® Measures, for Care Provided in 2001 (data includes all systems).

Measure	System with Highest Percentage	System with Lowest Percentage	Wisconsin Average of Systems	East North Central Regional Avg*	National Average*
DIABETES					
LDL-C screening	95%	55%	80%	81%	81%
LDL-C controlled	76%	47%	55%	51%	50%
Nephropathy monitored	98%	44%	55%	47%	46%
Poorly controlled HbA1c	11%	33%	25%	33%	37%
One/More HbA1c	97%	80%	87%	82%	81%
Eye exam	95%	33%	64%	55%	52%
CARDIOVASCULAR					
Control high blood pressure	64%	50%	58%	57%	55%
Beta-blocker after CV event	100%	81%	96%	93%	92%
Cholesterol controlled	85%	49%	65%	60%	59%
Cholesterol screening	91%	70%	78%	77%	77%
CANCER					
Breast cancer screening	90%	57%	83%	77%	76%
Cervical cancer screening	91%	78%	85%	80%	80%

*Source: The State of Health Care Quality 2002: Industry Trends and Analysis, NCQA

All measures were performed on enrollees ages 18-75 years old except the following: beta-blocker treatment after CV event (>35 yrs), controlling high blood pressure (46-85 yrs), breast cancer screening (52-69 yrs), and cervical cancer screening (21-64 yrs).

RESULTS: COMPARISON OF TWO METHODS IN ASSESSING DATA IN SELECTED HEDIS® MEASURES

- ✓ Figures 1 and 3 describe comparative Comprehensive Diabetes Care and cardiovascular-related measures over time. These percentages were calculated using only the HMOs participating for the past three years (diabetes measures), and for the past two years (cardiovascular-related measures). The calculations also incorporate the number of HMO enrollees. This is called weighted data. For example, if HMO A has 1,000 enrollees and 60% of them receive eye exams, while HMO B has 5,000 enrollees and 70% of them receive eye exams, the average value **is not** 65%. The average percent of patients in Wisconsin receiving eye exams is 68%. The average value is weighted toward HMO B, since there are more patients.
- ✓ As the Project enters its fifth year, the group looks for ways to improve measurements and quality. The collaborators recently decided to discontinue the use of weighted data for comparative data. For this Project, quality improvement interventions are generally directed at the HMO level and not individual patients, so the percentages should be the average value of HMOs, not the average value of patients in Wisconsin. This change was implemented because the collaborators agreed to this way to measure outcomes.
- ✓ Starting next year, the comparative data over time will be reported as unweighted data. Furthermore, Figure 2 and Table 1 (yearly data) are currently measured as unweighted data. Since this year is a transition year, the following table shows the differences between the weighted (wtd) and unweighted (unwtd) data in comparative data. The quality improvements are more pronounced when looking at the unweighted (HMO level) data. Next year's report will feature only unweighted data.

Tables 2 and 3: Results Comparison of Weighted and Unweighted Diabetes and Cardiovascular-related Data.

DIABETES	LDL-C Screening		LDL-C Controlled		Nephropathy Monitored		Poor Control HbA1c		One/More HbA1c		Eye Exam	
	Wtd	Unwtd	Wtd	Unwtd	Wtd	Unwtd	Wtd	Unwtd	Wtd	Unwtd	Wtd	Unwtd
1999	72%	69%	45%	43%	47%	44%	28%	30%	86%	83%	62%	62%
2000	79%	78%	52%	50%	53%	52%	27%	28%	88%	88%	67%	68%
2001	82%	83%	55%	57%	54%	59%	25%	23%	87%	89%	65%	67%
Percent change	+14%	+20%	+22%	+33%	+15%	+34%	+11%	+23%	-	+7%	-	+8%

CARDIOVASCULAR	High Blood Pressure Controlled		Beta-Blocker Treatment after Heart Attack		Chol. Control after acute CV event		Chol. Screen after acute CV event	
	Wtd	Unwtd	Wtd	Unwtd	Wtd	Unwtd	Wtd	Unwtd
2000	49%	54%	89%	90%	64%	66%	80%	80%
2001	58%	58%	93%	95%	69%	70%	78%	82%
Percent change	+18%	+7%	+4%	+6%	+4%	+6%	-	+

CONCLUSIONS

The results from this Wisconsin Collaborative Diabetes Quality Improvement Project show that most diabetes care measures continued to improve in Wisconsin. Since HbA1c monitoring rates are now nearly 90%, further improvements may be challenging. However, an initiative promoting eye exams, begun in 2001, may lead to continued improvement in eye exams in 2002. The quality of diabetes care provided in 2001 continues to vary among health systems, suggesting opportunities for continued improvement in 2002 and beyond.

These results also demonstrate that the state's diverse HMOs are willing to collaborate with multiple partners and the state health department on quality improvement projects. The project strongly illustrates that an ongoing communication forum is essential to:

- Distribute new research and resources
- Promote dynamic brainstorming and planning
- Coordinate the sharing of quality improvement strategies
- Offer opportunities to use the data to initiate new quality improvement initiatives

These successful results were achieved due to a high level of commitment to the collaborative effort. Collaboration is key to the continued successes of this project.

ACKNOWLEDGEMENTS

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TECHNICAL NOTES

Invitations to participate in the Wisconsin Collaborative Diabetes Quality Improvement Project were mailed to the 20 health maintenance organizations licensed in Wisconsin and, additionally, to health systems that participated previously. Project participants were asked to submit HEDIS[®] measures that reflected the quality of diabetes care and selected aspects of cardiovascular care and cancer screening. HEDIS[®] collects measures for care delivered in the previous calendar year (i.e., HEDIS[®] 2002 reflects care delivered in 2001). The Project adopted NCQA's current HEDIS[®] definitions to maintain consistency in data collection.

HEDIS[®] Comprehensive Diabetes Care measures are limited to individuals with diabetes 18-75 years of age and include: eye exam, LDL-C screening performed, LDL-C controlled (<130 mg/dL); hemoglobin A1c testing performed; HbA1c poorly controlled (>9.5%); and nephropathy monitoring. Health systems were asked to report selected cardiovascular care measures including beta-blocker treatment after heart attack (35 years and older); cholesterol management after acute cardiovascular-related events (including screening and control (<130mg/dL), ages 18-75); controlling high blood pressure (ages 46-85); and advising smokers to quit (18 years and older). For cancer screening measures, health systems were asked to report the overall female breast cancer screening for women between 52-69 years of age and cervical cancer screening for women 21-64 years of age. Some measures (stratified HbA1c, stratified LDL-C, and "advice to quit smoking") were not consistently reported so they are not included in this report.

Participating health systems completed a data collection form for their commercial population (excluding Medicaid or Medicare beneficiaries). Participants reported information on their data collection methodology, sample size, eligible population, and percent of individuals receiving the measure, as well as information regarding accreditation status, whether the measures were audited, and if the organization maintains a diabetes registry. To maintain confidentiality among the health care systems, participants were assigned a unique, confidential code number.

The eligible patient population for the HEDIS[®] Comprehensive Diabetes Care measures portion of this study was defined as any individual with a diabetes diagnosis meeting the continuous enrollment definition in a managed care organization or health care delivery system. Individuals with diabetes were defined as those who were taking insulin and/or oral hypoglycemics/ antihyperglycemics during the reporting year, or those having two outpatient encounters or one encounter in an emergency or inpatient setting with a diagnosis of diabetes. The definition for eligible patient population for the selected cardiovascular-related measures varied. The eligible patient population for cancer screening was the overall female health system population (not just those with diabetes) and varied by age in each measure. Since relative eligibility numbers can be readily linked to specific systems, in the interest of continued confidentiality, these eligibility figures are not published.

In Figure 2, the mean refers to the average. The mean is calculated by summing all the observations and dividing by the number of observations. In the same figure, range is a measure of data spread. This found by taking the difference of the maximum point and the minimum point.

In Figures 1 and 3, aggregate percentages were calculated as weighted averages, incorporating the number of specific HMO enrollees (see page 6). Only HMOs participating in the project for all specific measurement years were included in the comparative data over time (Figures 1 and 3). Figure 2 and Table 1 (2001 data only) were calculated as unweighted averages. All systems

participating this past year are included in the 2001 data calculations. In efforts to improve measurements and quality, the collaborators decided that all data will be calculated as unweighted data starting next year. This method will improve comparability with national and regional benchmarks.